

Synth-Etic: The World's First "Hood-Wind" Musical Instrument

Mitchell, Justin (School: Chattanooga School for the Arts and Sciences)

Are you creative? Would you like to be? Do you like music? Do you ever travel, and not have anything to do? The objective of this project was to make a device that encourages and develops creativity, allows music lovers to learn to create their own music, and those who aren't music lovers yet, to learn to love it. The device allows both musicians and non-musicians to create music on the go: play whatever they want, whenever they want, wherever they are. The music maker has been created in the pocket of a "hoodie" or hooded sweatshirt. The design includes a set of keypads consisting of 6 pads for each hand, ergonomically arranged and located within the hoodie pocket. Painted directly onto fabric using electrically conductive paint, each keypad has a raised border so the user can easily find the correct finger positions. The keypads are connected to a circuit board with a micro-processor which was programmed to achieve the desired functionality. Synth-etic is powered by a small lithium ion battery and has a headphone jack for music output. Synth-etic features an 8-note octave scale operated by the fingers, and thumb keys which allow the pitch to be modulated up or down, and the user to select between 127 different instrument settings. It is a truly wearable musical instrument which delivers portability, privacy and an inspiration to create, in all users.